X37a Properties of low-mass starburst Hα emitters (Flash-HAEs) at z $\sim$ 2.3 from broad-band selection

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Recent studies reveal that low-mass galaxies at z $>$ 6 are expected to be major contributors to cosmic reionization. Because of the observational limitation, a practical route to grasp the physical properties of these early galaxies is to undertake a detailed study on their lower-redshift analogs. We investigate the properties of $\sim$1800 Hα emitters (HAEs) at z $\sim$ 2.3, selected from the flux excess in the ZFOURGE Ks broad-band data to the best-fit stellar continuum. A new population called low-mass starburst Hα emitters (Flash-HAEs) is identified from their elevated SFR(Hα) above the star formation main sequence (SFMS) in low-mass regime below 10^9 $M_\odot$. The 306 Flash-HAEs in our work may be an analog population of the low-mass galaxies at the epoch of reionization. The hydrogen ionizing photon production efficiencies, ξ_{ion}, of the Flash-HAEs have a median value of $\log(\xi_{ion}/erg^{-1}\ Hz) = 25.18 \pm 0.16$, higher than that of the main sequence galaxies by $\sim$0.2 dex at similar redshift. This indicates that the Flash-HAEs are more efficient in producing ionizing photons. We will further discuss physical properties of the Flash-HAEs with multiple rest-frame optical emission lines obtained from medium band filters. These new findings would provide implication to the low-mass galaxies at the epoch of reionization.